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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/391,399	09/08/1999	HITOSHI YAMAGATA	3553-2	8545

7590 06/30/2003

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EXAMINER
FETZNER, TIFFANY A

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 06/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/391,399	Hitoshi Yamagata
Examiner	**Art Unit**
Tiffany Fetzner	2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Apr 28, 2003* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-12* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED Non-Final ACTION

1. The April 28th 2003 Response is considered free of new matter by the examiner.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

3. Applicant cannot rely upon the foreign priority papers to overcome any rejections based on the Boernert et al., reference US patent 6,317,619 B1 filed July 29th 1999 reference because a certified English translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

4. ***Response to Arguments***

5. Applicant's arguments filed April 28th 2003 have been fully considered but they are not persuasive, because new grounds of rejection that meets applicant's **Amended claims 1-7, 11** and **claims 8-10, 12** which were added with the May 10th 2001 amendment, are applied in this non-final action.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 1-4,** and **6-12** are rejected under **35 U.S.C. 103(a)** as being unpatentable over **Boernert et al.,** US patent 6,317,619 B1 issued November 13th 2001; in view of **Englund et al.,** US patent 5,197,474 issued March 30th 1993; and in further view of McDougall US patent 4,689,591 issued August 25th 1987.

9. With respect to (Amended) **Claim 1**, the **Boernert et al.,** reference teaches, and shows "a magnetic resonance imaging apparatus", [See figures 1 and 2, col. 6 line 1 through col. 11 line 10] The **Boernert et al.,** reference also teaches, and shows "a static magnetic field generator for generating a static field;" [See Figures 1, 2, and col. 6 lines 4-11] "a gradient magnetic field generator for generating a gradient magnetic field that is superimposed on the static magnetic field;" [See col. 6 lines 12-33; Figures 1, 2,] "a radio-frequency magnetic field pulse transmitting / receiving unit, which applies a radio frequency pulse to a region of interest of a patient that is located within the static magnetic field, and which also receives a magnetic resonance signal that is generated from the patient;" [See Figures 1, 2, 4, col. 6 lines 34-67 col. 8 lines 27-33].

10. Boernert et al., also teaches "a patient couch", (i.e. [See Figure 1 where patient 10 is arranged on table top 4, col. 6 lines 42-50; col. 18 lines 15-24; col. 9 lines 43-61] table top 4 is

interpreted by the examiner as applicant's "patient couch") which enables movement of the patient" [See col. 6 lines 42-50; col. 18 lines 15-24; col. 9 lines 43-61]; **Boernert et al.,** teaches "a position information establishing apparatus" (i.e. moveable RF coil assembly 6) "which provides 3-dimensional position information of the region of interest of the patient" [See col. 5 lines 60-67; col. 6 lines 51-67; col. 7 lines 15-21; col. 8 lines 47-62; col. 12 lines 3-13; col. 13 lines 12-30; col. 13 lines 48-63; col. 14 lines 51-61; col. 15 lines 17-20; col. 18 lines 22-24; which teach 3-dimensionality specifically]; **Boernert et al.,** also teaches "a patient couch controller" (i.e .table top controller component 21 Figures 1, and 2; col. 6 lines 42-50; col. 9 lines 43-61; col. 18 lines 15-24;]) "for moving the patient couch, based on the provided position information" [See col. 18 lines 15-24; col. 9 lines 43-61; col. 6 lines 42-50].

11. The **Boernert et al.,** reference teaches and suggests that, the locations at which a patient is repositioned in three-dimensions may comprise locations that are "substantially either within the static magnetic field or within the gradient magnetic field. [See col. 18 lines 15-24; and also col. 1 lines 61-64; col. 6 lines 42-50; col. 9 lines 43-60]

12. **Boernert et al.,** lacks directly teaching that "the region of interest is re-positioned in 3-dimensions substantially either at the *center* of the static magnetic field or at the *center* of the gradient magnetic field", However, **Boernert et al.,** teaches an apparatus where "the MR apparatus tracks the current position of the moveable RF coil assembly with respect to the homogeneity volume of the main-field magnet and of the magnetic gradient field system. ... the patient table is automatically commanded to move along in order to keep the region being imaged within these homogeneity volumes. The region being imaged indicated by the 3D position and 3D

orientation of the moveable RF coil assembly." [See col. 18 lines 15-24; and also col. 1 lines 61-64; col. 6 lines 42-50; col. 9 lines 43-60] Additionally in the **Boernert et al.,** reference the "center of the static magnetic field" and the "center of the gradient magnetic field" are both within the scope of the location/position tracked homogeneity volumes directly taught by **Boernert et al.,** therefore, it would have been obvious to one of ordinary skill in the art, at the time that the invention was made that the scope of applicant's feature is met by the teachings of the **Boernert et al.,** reference.

13. **Boernert et al.,** lacks directly teaching that the locations at which a patient is repositioned in three-dimensions may comprise locations that are "substantially either at the center of the static magnetic field or at the center of the gradient magnetic field." However both features of patient positioning / repositioning (i.e."substantially at the center of the static magnetic field" or "substantially at the center of the gradient magnetic field) are also known from the prior arts of **McDougall** and **Englund et al**. The **Englund et al.,** reference teaches positioning / repositioning [See Figures 1, 2, 4] a patient bed upon which an RF coil is mounted so that the center of imaging of the RF coil is located in the axial direction of the magnet at the same point in the middle (i.e. the center) of the magnet [See **Englund et al.,** col. 5 lines 17-25; col. 2 lines 27-33; col. 1 lines 49-52; Figures 1-4; abstract] The **McDougall** reference teaches and shows an MR apparatus with a patient on table 22 of Figure 1 where the patient has been brought into the device, and teaches that in the past it was necessary to place the patient so that the imaging locations of a patient's body intersected the homogeneous (i.e. static) region which was centered at the geometric center of magnetic field generating solenoids. [See **McDougall** col. 1 lines 9-26; the examiner notes that

this teaching includes both rf and gradient magnetic field solenoids.] **McDougall** also teaches that an MRI magnet assembly generates a substantially uniform magnetic field in a homogeneous (i.e. static) region, with the homogeneous region and the "center" of the homogeneous region being offset from the geometric center of the assembly. [See **McDougall** abstract, Figure 1, col. 1 line 5 through col. 5 line 34] Additionally, the gradient coils of **McDougall** are taught to be conventional, so it would have been obvious to one of ordinary skill in the art, at the time that the invention was made that the gradient coils like the RF coils intersect the homogeneous (i.e. static) region of the magnet generating means "at the geometric center of the magnetic field generating solenoids" (ie. The gradient coils).Therefore, imaging locations of a patient at "substantially the center of the static magnetic field" is taught by both the **McDougall** and **Englund et al.**, references, with the **McDougall** reference also addressing imaging locations of a patient at substantially the center of the gradient magnetic field. [See **McDougall** col. 5 lines 5-15; col. 1 lines 10-26].

14. It would have been obvious to one of ordinary skill in the art, at the time that the invention was made to modify the teaching of **Boernert et al.,** to include the teachings of **McDougall** and **Englund et al.**, because both references teach positioning a patient in a magnetic resonance imaging device, and the **Boernert et al.,** reference specifically teaches that "the 3D position detection system of **Boernert et al.,** is adaptable to any position detection system that can function in the MR environment to repetitively generate accurate position signals" the motivation to combine is simply that **Boernert et al.,** teaches combining the **Boernert et al.,** reference with other MR position detecting systems.

15. With respect to (Once Amended) **Claim 2, Boernert et al.,** teaches and suggests that "the position information establishing apparatus accepts input position information based on an image of the patient that is obtained from the magnetic resonance signal." [See col. 13 lines 30-63; col. 7 lines 15-21]

16. With respect to (Once Amended) **Claim 3, Boernert et al.,** teaches "the position information establishing apparatus comprises a position detection apparatus that detects the position of the region of interest." [See col. 9 lines 43-61; col. 18 lines 15-34]

17. With respect to (Once Amended) **Claim 4, Boernert et al.,** suggests "the patient couch controller" (i.e. table top controller 21) "performs an initial approximate positioning of the patient couch, based on a signal from the position detection apparatus" [See Figures 1, 2 where patient 10 is arranged on table top 4, controlled by controller 21, and col. 6 lines 42-50; col. 18 lines 15-24; col. 9 lines 43-61; col. 13 lines 11-63]

18. With respect to (Amended) **Claim 6, Boernert et al.,** teaches, "A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient couch that is disposed within a static magnetic field and a gradient magnetic field"; [See Figures 1, 2, col. 6 lines 43-50; col. 9 lines 43-61; col. 18 lines 15-24] **Boernert et al.,** also teaches, and suggests "applying a radio-frequency pulse to the region of interest of the patient, and receiving a signal that is generated from the patient;" [See col. 6 lines 34-67; col. 8 lines 27-33;] "reconstructing a plurality of images of the patient, based on the signal received" [See col. 13 lines 11-63; col. 17 line 8 through col. 18 line 10; col. 15 lines 17-36] The examiner interprets real time imaging to broadly suggest "reconstructing a plurality of images of the patient" because in

real-time imaging the reconstructed image is continuously generated, or updated, so numerous images are implicitly produced. **Boernert et al.,** teaches, and suggests "selecting an image that includes the region of interest from the plurality of images of the patient" [See col. 16 line 63 through col. 16 line 10; and col. 13 lines 11-30 where a previously obtained three-dimensional image of the desired imaging region of the patient is used as a reference]

19. **Boernert et al.,** also teaches, and suggests "moving the patient couch, based on the selected image, so that the region of interest of the patient substantially coincides in 3-dimensions with either the static magnetic field or the gradient magnetic field;" [See col. 13 lines 11-30 with col. 14 line 51 through col. 18 line 10; col.18 lines 15-24; col. 9 lines 43-61] **Boernert et al.,** also teaches, and suggests "moving the patient couch based on a signal from a position detector so that a region of interest of the patient approximately coincides with either the static magnetic field or the gradient magnetic field;" [See Figures 1, 2, col. 6 lines 43-50; col. 9 lines 43-61; col. 18 lines 15-24; and the reasons given in the rejection of claim 1, which need not be reiterated]

20. The **Boernert et al.,** reference lacks directly teaching that the region of interest coincides with either the "center" of the static magnetic field or the "center" of the gradient magnetic field, because the exact phrase "the center of the static magnetic field or the center of the gradient magnetic field;" is lacked by **Boernert et al.** However, as mentioned earlier in the rejection of claim 1, the prior arts of **McDougall** and **Englund et al**., teach and suggest this feature, therefore the teachings as to what each reference teaches and lacks regarding this feature have already been addressed and need not be reiterated. The same reasons for rejection, obviousness and motivation to combine, that apply to **claim 1** also apply to **claim 6**.

21. With respect to (Amended) **Claim 7**, **Boernert et al.,** teaches, and suggests "designating the region of interest within the selected image." [See col. 14 line 21 through col. 15 line 36 and col. 13 lines 11-30] The same reasons for rejection, obviousness and motivation to combine, that apply to **claims 1, 6** also apply to **claim 7**.

22. With respect to **Claim 8**, **Boernert et al.,** teaches, "A method for performing magnetic resonance imaging diagnosis, said method comprising: placing the patient onto a patient couch (i.e. couch 128) that is disposed within a static magnetic field and a gradient magnetic field"; [See Figures 1, 2; col. 6 lines 42-50; col. 18 lines 15-24; col. 9 lines 43-61]. **Boernert et al.,** also teaches, designating a 3-dimensional position of a region of interest of the patient; [See col. 14 line 51 through col. 15 line 36], and moving the patient couch, so that the region of interest of the patient substantially coincides 3-dimensionally with the static magnetic field or the gradient magnetic field.

23. The **Boernert et al.,** reference lacks directly teaching that the region of interest coincides with either the "center" of the static magnetic field or the "center" of the gradient magnetic field, because the exact phrase "the center of the static magnetic field or the center of the gradient magnetic field;" is lacked by **Boernert et al.** However, as mentioned earlier in the rejection of claim 1, the prior arts of **McDougall** and **Englund et al**., teach and suggest this feature, therefore the teachings as to what each reference teaches and lacks regarding this feature have already been addressed and need not be reiterated. [See the rejection reasons given for the rejection of **claims 1, and 6**, which need not be reiterated.] The same reasons for rejection, obviousness and motivation to combine that apply to **claims 1, 6** also apply to **claim 8**.

24. With respect to **Claim 9**, this claim just restates the additional limitations of **claims 6** and **7,** with the difference being the dependency from **claim 8**. The features of claim 9 have already been addressed in this **action. Boernert et al.,** teaches the limitations of **claim 9**, for the same reasons already given in the rejections of **claims 1, 6,** and **7** which need not be reiterated. Therefore, the same reasons for rejection, obviousness and motivation to combine that apply to **claims 1, 6, 7, 8** also apply to **claim 9**.

25. With respect to **Claim 10**, **Boernert et al.,** teaches, and suggests "applying a radio-frequency pulse to the region of interest of the patient, and receiving a signal that is generated from the patient;" [See col. 6 lines 34-67; col. 8 lines 27-33;] "reconstructing a plurality of images of the patient, based on the signal received". [See col. 13 lines 11-63; col. 17 line 8 through col. 18 line 10; col. 15 lines 17-36] The examiner additionally interprets real time imaging to broadly suggest "reconstructing a plurality of images of the patient" because in real-time imaging the reconstructed image is continuously generated, or updated, so numerous images are implicitly produced. **Boernert et al.,** teaches, and suggests "selecting an image that includes the region of interest from the plurality of images of the patient" [See col. 16 line 63 through col. 16 line 10; and col. 13 lines 11-30 where a previously obtained three-dimensional image of the desired imaging region of the patient is used as a reference] and **Boernert et al.,** teaches, and suggests designating the region of interest within the selected image. [See col. 14 line 21 through col. 15 line 36 and col. 13 lines 11-30] **Boernert et al.,** teaches the step of "obtaining positional information from a position sensor representing a 3 dimensional position for the region of interest", [See col. 9 lines 8-20; col. 14 lines 23-28] **Boernert et al.,** also teaches, and suggests

"moving the patient couch based on a signal from a position detector so that a region of interest of the patient approximately coincides with either the static magnetic field or the gradient magnetic field;" [See Figures 1, 2, col. 6 lines 43-50; col. 9 lines 43-61; col. 18 lines 15-24; col. 4 57-63]

26. The **Boernert et al.,** reference lacks directly teaching that the region of interest coincides with either the "center" of the static magnetic field or the "center" of the gradient magnetic field, because the exact phrase "the center of the static magnetic field or the center of the gradient magnetic field;" is lacked by **Boernert et al.** However, as mentioned earlier in the rejection of claim 1, the prior arts of **McDougall** and **Englund et al**., teach and suggest this feature, therefore the teachings as to what each reference teaches and lacks regarding this feature have already been addressed and need not be reiterated. [See the rejection reasons given for the rejection of **claims 1, and 6**, which need not be reiterated.] The same reasons for rejection, obviousness and motivation to combine that apply to **claims 1, 6, 7, 8, 9** also apply to **claim 10**.

27. With respect to **Amended Claim 11**, **Boernert et al.,** teaches and suggests "A method for three-dimensionally positioning a patient region of interest substantially as an optimum MR imaging position for diagnostic imaging within an MRI system" [See col. 2 line 59 through col. 3 line 13, where the ability to provide more rapid acquisition and reduced aliasing suggests optimizing] **Boernert et al.,** teaches and suggests a method comprising: positioning a patient region of interest at a first position within an MRI field of view; generating MR images of the patient in three dimensions while located at said first position" [See col. 6 lines 34-67; col. 10 lines 33-67; col. 12 lines 33-38; col 15 line 57 through col. 16 line 13] "using a first high speed

positioning scan MRI data acquisition pulse sequence; [See col 16 lines 14-67; col. 2 line 59 through col. 3 line 13] "locating and designating the patient region of interest position within said images;" [See col. 17 lines 20-32] "generating 3-dimensional position difference data between the designated position of the patient region of interest in the images and an optimum MR imaging position;" [See col. 17 lines 33 through col. 18 line 10] "automatically re-positioning the patient region of interest in 3-dimensions from said first, now designated, position to an optimum MR imaging position using said position difference data and generating diagnostic MRI data" [See col. 13 lines 12-30; col. 17 lines 33 through col. 18 line 24]. The step of "using a second diagnostic MRI data acquisition pulse sequence, different than said first sequence, to provide diagnostic images having improved precision and quality with reduced image distortion, non-uniformities and fat, after the patient is re-positioned to said optimum MR imaging position" is suggested and taught by **Boernert et al.,** [See col. 16 line 13 through col. 18 line 25]. The same reasons for rejection, obviousness and motivation to combine, that apply to **claims 1, 6, 7, 8, 9, 10,** also apply to **claim 11**.

28. With respect to **Claim 12**, **Boernert et al.,** teaches and suggests "position data provided by a position sensor that automatically senses a relative spatial position between a movable patient and a fixed MRI system." [See col. 13 lines 12-63; col. 9 lines 8-29; the entire rejection of claim 10, and the entire reference in general]. The same reasons for rejection, obviousness and motivation to combine that apply to **claims 1, 6, 7, 8, 9, 10, 11,** also apply to **claim 12**.

29. **Claims 5** is rejected under **35 U.S.C. 103(a)** as being unpatentable over **Boernert et al.,** US patent 6,317,619 B1 issued November 13th 2001; in view of **Englund et al.,** US patent

5,197,474 issued March 30th 1993; McDougall US patent 4,689,591 issued August 25th 1987 and in further view of **Akgun** US patent 4,968,937 issued November 6th 1990.

30. With respect to (Amended) **Claim 5**, **Boernert et al.,** teaches an open MRI apparatus where "the patient couch (i.e. patient table component 4) is capable of moving the patient longitudinally (i.e. horizontally). [See col. 6 lines 43-50] **Boernert et al.,** lacks directly teaching that "the patient couch (i.e. patient table component 4) is capable of moving the patient "vertically". However, the ability to have the patient table, couch, bed, or support of an MR apparatus move in a vertical direction has been well-known for over a decade, because **Akgun** shows an open MR apparatus device where the patient table moves vertically [See **Akgun** Figure 11] Additionally, **Englund et al., also** teaches vertical motion of the patient bed because the bed is capable of being raised and lowered [See col.1 lines 62-64] Therefore, it would have been obvious to one of ordinary skill in the art, at the time that the invention was made that the open MR apparatus of the **Boernert et al.,** reference could be readily modified by an individual of ordinary skill in the art to include the capability of the patient table, carrier, bed, couch, support, or platform onto which a patient to be scanned in an MR apparatus is positioned, to be moved in a vertical manner because the MR apparatus of **Boernert et al.,** specifically suggests the ability to adaptively combine "the 3D position detection system of the **Boernert et al.,** reference to any position detection system that can function in the MR enirоment to repetitively generate accurate position signals" [See col. 7 lines 15-21] Therefore, the motivation to combine is simply that **Boernert et al.,** teaches combining the **Boernert et al.,** reference with other MR position detecting systems. The same reasons for rejection, that apply to **claim 1** also apply to **claim 5**.

31. **Prior Art made of Record**

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) US patent 6,112,110 issued to **Wilk**, August 29th 2000 and filed February 12th 1999.

B) US patent 6,198,957 B1 issued to **Green** March 6th 2001 filed December 19th 1997.

C) US patent 5,735,278 issued to **Hoult et al.**, April 7th 1998 and filed March 15th 1996.

D) US patent 924,987 issued to **Meaney et al.**, July 20th 1999 filed October 6th 1997.

E) US patent 4,829,252 issued to **Kaufman** May 9th 1989.

F) US patent 6,128,522 issued to **Acker et al.**, October 3rd 2000 and filed May 22nd 1998.

G) US patent 6,049,208 issued to **Takekoshi et al.**, April 11th 2000 filed Nov. 17th 1995.

H) US patent 6,094,590 issued to **Kan et al.**, July 25th 2000 filed September 18th 1997.

I) US patent 5,899,857 issued to **Wilk** May 4th 1999 filed January 7th 1997.

Conclusion

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tiffany Fetzner** whose telephone number is **(703) 305-0430**. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Diego Gutierrez**, can be reached on **(703) 308-3875**. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3432 .

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.

Tiffany A. Fegna

TAF

June 24, 2003

EDWARD LEEKOWITZ
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